

What Is Claimed Is:

1. A feeder for the surface mounting device comprising:

5 a feeding unit being installed at one side of a main frame, having a plurality of armature coils and a circular permanent magnetic unit facing the plurality of armature coils to generate a rotation/reverse rotation force and carry a tape at a predetermined pitch interval
10 and having a position sensing unit and a position detecting disk capable of sensing the position of the circular permanent magnetic unit;

15 a vinyl separation unit being assembled at the main frame and carrying the vinyl removed from the tape by the rotation force generated from the feeding unit or re-carrying the vinyl by the reverse rotation force; and

20 a vinyl recovery unit being assembled at the other end of the main frame, being connected to the vinyl separation unit by a belt, and recovering the vinyl by winding the same by the rotation force transferred from the vinyl separation unit through the belt 133 or discharging the vinyl to the vinyl separation unit by the reverse rotation force.

25 2. The feeder for the surface mounting device according to claim 1, wherein the feeding unit comprises a first disc member installed a plurality of armature

coils and a rotation shaft rotatably installed at its center;

5 a second disc member inserted and installed to the rotation shaft to be linked and rotated by the rotation of the rotation shaft;

a circular permanent magnetic unit mounted to a lower portion of the second disc member and for generating a rotation/reverse rotation force by the interaction with the armature coils;

10 a position detecting disk installed to an upper portion of the second disc member with a predetermined distance and for transferring rotation force of the rotation shaft;

15 a feeding unit gear assembled to an end of the rotation shaft, which is mounted to the main frame, and connected to the position detecting disc by a gear, thereby rotating the rotation shaft by the rotation/reverse rotation force generated from the position detecting disc;

20 a driving gear assembled to a bottom surface of the feeding unit gear and inserted to a rotation shaft, thereby rotating a driving teeth inserted to a transfer hole by the rotation of the rotation shaft and carrying the tape with a constant pitch interval; and

25 a position detecting unit assembled to the other end of the rotation shaft for sensing the rotation speed of the rotation shaft.

3. The feeder for the surface mounting device according to claim 1, wherein the position detecting unit comprises a light receiving element and a light emitting element, which are installed to a predetermined portion thereof.

4. The feeder for the surface mounting device according to claim 1, wherein the vinyl separation unit comprises a first separation unit connected to the feeding unit gear and for receiving the rotation/reverse rotation force transferred from the feeding unit, thereby performing rotation/reverse rotation;

a second separation unit gear connected to an end of the first separation unit and rotated by the rotation/reverse rotation force of the first separation unit gear; and

a vinyl discharge gear connected to the second separation unit gear and rotated in the reverse direction to carry the vinyl when it receives the rotation force transferred from the second separation unit gear, or to re-carry the vinyl when it receives the reverse rotation force of the second separation unit gear.

25 5. The feeder for the surface mounting device according to claim 1, wherein the vinyl recovery unit comprises a recovery unit gear connected to the first

separation unit gear by a belt to receive the rotation/reverse rotation force of the first separation unit gear, thereby performing rotation/reverse rotation; and

5 a recovery reel assembled at one side of the recovery unit gear, for thereby recovering the vinyl by winding it around the recovery reel or discharging the recovered vinyl to the vinyl separation unit according to the rotation/reverse rotation force of the recovery
10 unit gear.

6. The feeder for the surface mounting device according to claim 2, wherein a ball bearing is installed at the center portion of the first disc member
15 in order to be assembled and rotated the rotation shaft.

7. The feeder for the surface mounting device according to claim 2, wherein the position detecting unit comprises a light receiving element and a light
20 emitting element.

8. A feeder for the surface mounting device comprising:

a feeding unit including a first disc member
25 installed a plurality of armature coils and a rotation shaft rotatably installed at its center; a second disc member inserted and installed to the rotation shaft to

be linked and rotated by the rotation of the rotation shaft; a circular permanent magnetic unit mounted to the second disc member and for generating a rotation/reverse rotation force by the interaction with the armature 5 coils mounted to an upper portion of the first disc member; a second feeding unit gear installed at a predetermined distance on the second disc member to transfer the rotation force of the rotation shaft; a first feeding unit gear installed at a predetermined 10 distance on the second feeding unit gear to transfer the rotation force of the rotation shaft; a driving gear connected to the first feeding unit gear by a first gear and having driving teeth formed on its outer circumferential surface to carry a tape to a suction 15 position with a constant pitch by receiving the rotation/reverse rotation force transferred from the first gear; a position detecting unit gear connected to the second feeding unit gear by a second gear and for rotating the rotation shaft by receiving the 20 rotation/reverse rotation force generated from the second feeding unit gear; a position detecting unit installed to the other end of the rotation shaft to sense the rotation speed of the rotation shaft;

a vinyl separation unit being assembled at the main 25 frame and carrying the vinyl removed from the tape by the rotation force generated from the feeding unit or re-carrying the vinyl by the reverse rotation force; and

a vinyl recovery unit being assembled at the other end of the main frame, being connected to the vinyl separation unit by a belt, and recovering the vinyl by winding the same by the rotation force transferred from 5 the vinyl separation unit through the belt 133 or discharging the vinyl to the vinyl separation unit by the reverse rotation force.

9. The feeder for the surface mounting device 10 according to claim 8, wherein a ball bearing is installed at the center portion of the first disc member in order to be assembled and rotated the rotation shaft.

10. The feeder for the surface mounting device 15 according to claim 8, wherein the position detecting gear receives the rotation/reverse rotation force from the second feeding unit gear by a belt.

11. The feeder for the surface mounting device 20 according to claim 8, wherein the vinyl separation unit comprises a first separation unit connected to the first feeding unit gear and for receiving the rotation/reverse rotation force transferred from the feeding unit, thereby performing rotation/reverse rotation; 25 a second separation unit gear connected to an end of the first separation unit and rotated by the rotation/reverse rotation force of the first separation

unit gear; and

a vinyl discharge gear connected to the second separation unit gear and rotated in the reverse direction to carry the vinyl when it receives the 5 rotation force transferred from the second separation unit gear, or to re-carry the vinyl when it receives the reverse rotation force of the second separation unit gear.

10 12. The feeder for the surface mounting device according to claim 8, wherein the vinyl recovery unit comprises a recovery unit gear connected to the first separation unit gear by a belt to receive the rotation/reverse rotation force of the first separation 15 unit gear, thereby performing rotation/reverse rotation; and

a recovery reel assembled at one side of the recovery unit gear, for thereby recovering the vinyl by winding it around the recovery reel or discharging the 20 recovered vinyl to the vinyl separation unit according to the rotation/reverse rotation force of the recovery unit gear.

13. The feeder for the surface mounting device 25 according to claim 8, wherein an encoder is used as the position detecting unit.